

REMARKS

Claims 1-5, 7-20 and 23-27 are pending and at issue. Claims 10-17 and 23-27 were withdrawn, without prejudice to their reinstatement, as directed to non-elected species. All of the pending claims stand rejected on prior art grounds under 35 U.S.C. §103. Claims 1-5, 7-9 and 18-26 have been objected to based on various informalities.

Claim Objections

The applicants have amended the claims to clarify the recited subject matter of claims 1 and 18, thereby obviating the objections to claims 1-5, 7-9 and 18-26.

Prior Art Rejections

Independent Claim 1

The office action rejects claim 1 based on a purported combination of the Sato patent and the newly-cited Rahn patent. Per the office action, Sato teaches the recited subject matter, except Sato does not teach a third layer having an index of refraction within the range of 2.2 to 2.4. For this, the office action points to Rahn.

The applicants traverse this rejection, and the purported combination, because the office action fails to establish *prima facie* obviousness. In order to establish *prima facie* obviousness, there must be actual evidence of a suggestion to modify a prior art reference or to combine two prior art references, and the suggestion to combine or modify the prior art must be clear and particular. See, for example, *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999), where the Court of Appeals for the Federal Circuit stated:

We have noted that evidence of a suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved...

* * *

The range of sources available, however, does not diminish the requirement for **actual evidence**. That is, the showing must be **clear and particular**. Broad conclusory statements regarding the teaching of multiple references, standing alone, are **not** 'evidence.' (emphasis added, citations omitted).

The office action identifies no teaching, suggestion or motivation for making the purported combination of the materials of Rahn with the configuration of Sato, as is required to sustain an obviousness rejection.

Moreover, no motivation to combine Rahn and Sato could be given. Both references are directed to different types of materials and use conventionally-considered incompatible processing techniques. Rahn discloses an antireflective coating formed on a substrate made of SF-57, Schott glass (see column 3, lines 40-41). Sato, in contrast, describes an antireflective coating made on a synthetic resin substrate. While the office action has suggested that the techniques unique to these different substrates may be combined in some way, as discussed on pages 5 and 6 of the present application, these two techniques in actuality point away from one another. Glass substrates are amenable to high temperature processing which provides much greater latitude in the materials that are used. With a glass substrate, for example, an antireflection film with a high index of refraction can be formed by heating the glass substrate to very high temperatures, e.g., 300°C, as described on page 5, lines 20-22 of the present application. As a result of this high temperature processing, Rahn is able to use TiO₂ on a glass substrate, which in that example is reported as having an index of refraction of 2.3.

In contrast, as explained from page 5, line 22 to page 6, line 2 of the present application, resin substrates such as that of Sato are not amenable to such high temperature processing. Prior to the present disclosure, resin substrates were processed at lower temperatures (e.g., 80°C) to form antireflection coatings. As described, low temperature formation has limited the antireflection films formed on synthetic resin substrates to an index of refraction of 2.15 and lower. Sato even describes the distinctions between inorganic glass substrate technology and plastic substrate technology. See, e.g., Sato, col. 2, ll. 1-42.

Given the differences between the processing techniques for glass and resin substrates, the applicants respectfully assert that not only is there no suggestion to combine Sato with Rahn, there would be no such teaching.

Another distinction that points away from the purported combination is with respect to the index of refraction layer configurations of Rahn and Sato. Rahn, as shown in Figures 2 and 4, describes a configuration where the glass substrate is immediately adjacent

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a high index of refraction material, layer 22 or 62. In contrast, Sato describes a resin substrate adjacent an abrasion layer and a foundation layer having an index of refraction similar to that of the resin substrate. That is, Rahn desires a high index material adjacent its substrate, while Sato does not. The index of refraction configurations between the two would appear to be incompatible, further evidencing the lack of any teaching or suggestion to combine them.

The present application describes techniques for overcoming the limitations of conventional systems, including having a first film and second film of thicknesses that may create environmental and wear resistance to protect the underlying substrate. Furthermore, the first film (nearest the substrate) has an index of refraction substantially equal to that of the substrate to achieve favorable optical properties.

Further still, there is no explanation of how one would go about forming an antireflection layer of Rahn's materials on Sato's resin substrate. Prior art must provide the suggestion or motivation. As instructed many times, both the suggestion to try and the expectation of success must be found in the prior art, not in the applicant's disclosure. *Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.*, 927 F.2d 1200, 1207 (Fed. Cir. 1991), citing *In re Dow Chemical Co.*, 837 F.2d 469, 475 (Fed. Cir. 1988). The mere fact that references can be modified is not sufficient to establish a prima facie case of obviousness. See Section 2143.01 of the M.P.E.P., which states: "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)" (emphasis original).

In light of the foregoing outlined remarks, the applicants respectfully submit that the rejection of claim 1 is improper and traversed. Reconsideration is respectfully requested.

Furthermore, the rejections of claims 2-5 and 7-9 depending from claim 1 are similarly traversed. None of the additional art cited by the examiner or other art of record teaches the recited subject matter or provides a teaching, suggestion or motivation to provide such subject matter.

Amended Claim 18

Claim 18 has been amended to recited a method including “forming a third film as a layer next to the outermost layer which is opposite the substrate, where the third film has a refractive index within a range from 2.2 to 2.4.” As outlined in the remarks above, none of the prior art teaches the use of such layers in a synthetic resin configuration. The office action has also commented that with respect to claim 18 the reference to the biasing voltage having a negative mean value and a positive maximum value was not previously recited. Claim 18 has been amended to recite “applying the bias supply electrode with a bias voltage having a negative mean value and a positive maximum value.” None of the prior art teaches this subject matter either. The rejections of claim 18 and claims 19 and 20 depending therefrom are traversed and reconsideration is requested.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Dated: October 26, 2005

Respectfully submitted,

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